For Research Use Only

Galc Polyclonal antibody

Catalog Number:11991-1-AP Featured Product 20 Publications

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Basic Information

Catalog Number:
11991-1-AP

Size:
600 ug/ml

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG3914

GenBank Accession Number:
BC086671

GeneID (NCBI):
14420

UNIPROT ID:
P54818

Full Name:
galactosylceramidase

Calculated MW:
77 kDa

Observed MW:
80 kDa, 30 kDa, 50 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB 1:500-1:1000
IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate
IHC 1:20-1:200
IF-P 1:50-1:500

Applications

Tested Applications:
WB, IHC, IF-P, IP, ELISA

Cited Applications:
WB, IHC, IF

Species Specificity:
human, mouse, rat

Cited Species:
human, mouse, rat, zebrafish

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : A375 cells, A549 cells, SH-SY5Y cells, mouse brain tissue, rat brain tissue

IP : NIH/3T3 cells,

IHC : human gliomas tissue,

IF-P : mouse brain tissue,

Background Information

The GALC antibody targets the liposomal enzyme Galactosylceramidase (GALC), which belongs to the glycosyl hydrolase 59 family. It hydrolyzes the galactose ester bonds of galactosylceramide, galactosylsphingosine, lactosylceramide, and monogalactosyldiglyceride. It is primarily found in the brain and kidneys where galactolipids are hydrolyzed (PMID:8634707). Deficiencies of GALC are primarily associated with the autosomal recessive Krabbe's disease. This disease is characterized by developmental delay caused by apoptosis of myelin-forming cells. GALC is responsible for hydrolyzing galactosylceramide, a cerebroside that is an important component of myelin. A deficiency in GALC causes loss of myelin to nerve cells, resulting in delayed nerve transmissions. Krabbe's disease has varying degrees of severity due to a large number of different genetic mutations in the gene. The GALC antibody can be used to detect the deletions in the GALC gene and functions of the enzyme (PMID:20886637). Normal GALC mRNA encodes the 80 kDa precursor, which is processed into 50 and 30 kDa subunits (PMID: 26865610).

Notable Publications

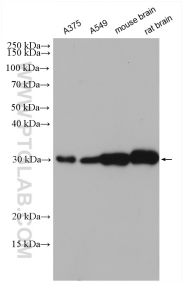
Author	Pubmed ID	Journal	Application
Bashir Tariq T	23077666	PLoS One	IHC
Sebastian Boland	36207292	Nat Commun	WB
Zhong-Da Li	36443285	Cell Death Dis	WB

Storage

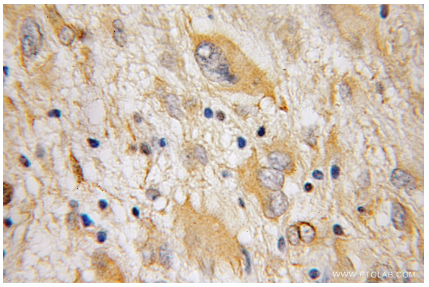
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:
T: 4006900926 E: Proteintech-CN@ptglab.com W: ptgcn.com

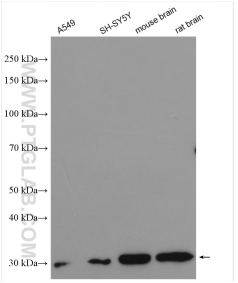
Selected Validation Data



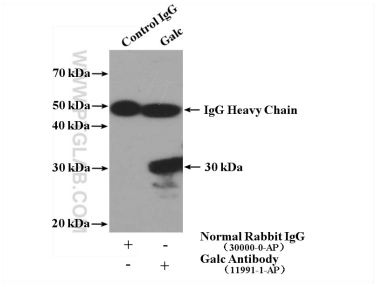
Various lysates were subjected to SDS PAGE followed by western blot with 11991-1-AP (Galc antibody) at dilution of 1:600 incubated at room temperature for 1.5 hours.



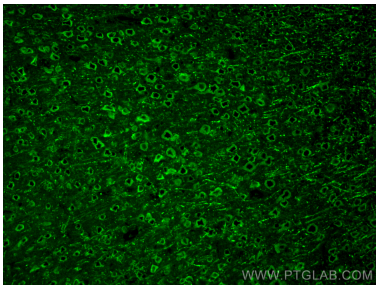
Immunohistochemical analysis of paraffin-embedded human gliomas using 11991-1-AP (Galc antibody) at dilution of 1:50 (under 10x lens).



Various lysates were subjected to SDS PAGE followed by western blot with 11991-1-AP (Galc antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



IP result of anti-Galc (IP:11991-1-AP, 4ug; Detection:11991-1-AP 1:300) with NIH/3T3 cells lysate 4000ug.



Immunofluorescent analysis of (4% PFA) fixed paraffin-embedded mouse brain tissue using Galc antibody (11991-1-AP) at dilution of 1:200 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).